

Environmental and economic impact of using logging residues as bioenergy: the case of Malaysia

ABSTRACT

The potential use of residues from the logging process was evaluated for electrical energy generation by direct combustion. The findings were based on logging residues accrued from 1990 to 2015 and were enumerated using a 43% residue recovery rate. The available logging residues were insufficient to supply the primary electrical energy demand as well as reduce the emission of carbon dioxide. However, when coupled with other agricultural residues, the potential energy generation from biomass was significant and could not only lead to reduced fossil fuel demand, but also improve the carbon credit and provide additional employment opportunities in the bioenergy sector.

Keyword: Logging residues; Electrical energy; Biomass; Energy consumption; Carbon dioxide